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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,854	12/16/2003	Jeremy M. Ford	16356.826, (DC-05328)	9080
27683	7590	12/12/2006	EXAMINER	
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202			CLEARY, THOMAS J	
			ART UNIT	PAPER NUMBER

2111

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/736,854	Applicant(s) FORD ET AL.	
	Examiner Thomas J. Cleary	Art Unit 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20040607</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-10 and 15-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.
2. Claim 1 recites the limitation "an audio coder decoder". It is unclear if this is intended to mean a coder and decoder such as a codec.
3. In reference to Claim 15, it is unclear what a "digital analog signal" is. For the purposes of evaluating prior art, the Examiner will assume this is intended to be a "digital audio signal".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-6, 11-17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent number 6,007,228 to Agarwal et al. ("Agarwal") and the - Audio Codec '97 Component Specification, Revision 2.2 ("AC97").

6. In reference to Claim 1, Agarwal discloses an information handling system including: a processor; memory coupled to the processor; glue logic coupled to the processor for facilitating connection of the processor to other devices (See Figure 4 Number 10' and Column 6 Lines 37-45); an audio coder decoder coupled to the glue logic and including a digital audio output (See Figure 4 Numbers 40, 54 and 58); and a docking station (See Figure 4 Number 20') including a digital audio receiver coupled to the digital audio output for converting digital audio to analog audio (See Figure 4 Numbers 52 and 60). Agarwal does not explicitly disclose that the digital audio output is a Sony-Philips Digital Interface (S/PDIF) digital audio output. Agarwal does disclose that the digital audio output conforms to the Audio Codec '97 standard (See Column 8 Lines 26-50). AC97 discloses support for S/PDIF communications (See Chapter 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Agarwal with an S/PDIF digital audio output, resulting in the invention of Claim 1, because S/PDIF is supported by the Audio Codec '97 standard used by Agarwal and because S/PDIF is an established consumer electronics digital audio interface (See Section 6.1 of AC97).

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7. In reference to Claim 2, Agarwal and AC97 disclose the limitations as applied to Claim 1 above. Agarwal further discloses a first docking connector to which the digital audio output is coupled (See Figure 4 Number 30).

8. In reference to Claim 3, Agarwal and AC97 disclose the limitations as applied to Claim 2 above. Agarwal further discloses a second docking connector to which the digital audio receiver is coupled (See Figure 4 Number 30).

9. In reference to Claim 4, Agarwal and AC97 disclose the limitations as applied to Claim 3 above. Agarwal further discloses that the first docking connector is connected to the second docking connector to couple the digital audio output to the digital audio receiver (See Figure 4 Number 30).

10. In reference to Claim 5, Agarwal and AC97 disclose the limitations as applied to Claim 1 above. Agarwal further discloses that the digital audio receiver includes an analog output (See Figure 4 and Column 7 Lines 41-44).

11. In reference to Claim 6, Agarwal and AC97 disclose the limitations as applied to Claim 5 above. Agarwal further discloses that a first power amplifier is coupled to the analog output (See Figure 4 Number 48 and Column 7 Lines 44-45).

12. In reference to Claim 11, Agarwal discloses a method of operating an information handling system including a portable portion (See Figure 4 Number 10') and a docking station (See Figure 4 Number 20'), the method comprising: generating, by the portable portion, a digital audio signal (See Figure 4 Number 58); sending the digital audio signal across a docking interface between the portable portion and a docking station (See Figure 4 Number 30); converting the digital audio signal to an analog audio signal (See Figure 4 Numbers 52 and 60); and amplifying the analog audio signal (See Figure 4 Number 48 and Column 7 Lines 44-45). Agarwal does not explicitly disclose that the digital audio signal conforms to a Sony-Philips Digital Interface (S/PDIF) standard. Agarwal does disclose that the digital audio output conforms to the Audio Codec '97 standard (See Column 8 Lines 26-50). AC97 discloses support for S/PDIF communications (See Chapter 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Agarwal with an S/PDIF digital audio output, resulting in the invention of Claim 11, because S/PDIF is supported by the Audio Codec '97 standard used by Agarwal and because S/PDIF is an established consumer electronics digital audio interface (See Section 6.1 of AC97).

13. In reference to Claim 12, Agarwal and AC97 disclose the limitations as applied to Claim 11 above. Agarwal further discloses that the docking interface includes a first connector to which the digital audio signal is provided (See Figure 4 Number 30).

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14. In reference to Claim 13, Agarwal and AC97 disclose the limitations as applied to Claim 12 above. Agarwal further discloses that the docking interface includes a second connector (See Figure 4 Number 30).

15. In reference to Claim 14, Agarwal and AC97 disclose the limitations as applied to Claim 13 above. Agarwal further discloses connecting the first connector to the second connector (See Figure 4 Number 30).

16. In reference to Claim 15, Agarwal and AC97 disclose the limitations as applied to Claim 14 above. Agarwal further discloses performing a digital to analog conversion on the digital audio signal after it passes from the first connector to the second connector of the docking interface, thus converting the digital audio signal to an analog audio signal (See Figure 4 Number 52 and Column 7 Lines 41-44).

17. In reference to Claim 16, Agarwal and AC97 disclose the limitations as applied to Claim 15 above. Agarwal further discloses amplifying the analog audio signal by a first audio amplifier thus providing a first amplified analog audio signal (See Figure 4 Number 48 and Column 7 Lines 44-45).

18. In reference to Claim 17, Agarwal and AC97 disclose the limitations as applied to Claim 16 above. Agarwal further discloses providing the first amplified analog audio signal to a line out output of the docking station (See Column 7 Lines 44-45).

19. In reference to Claim 21, Agarwal discloses an apparatus for operating a portable information handling system (IHS) comprising: a docking station coupled to the HIS (See Figure 4 Number 20'); means for generating a digital audio signal (See Figure 4 Number 40); means for sending the digital audio signal across a docking interface between the IHS and the docking station (See Figure 4 Numbers 30 and 58); a converter for converting the digital audio signal to an analog audio signal (See Figure 4 Numbers 52 and 60 and Column 7 Lines 41-44); and means for amplifying the audio analog signal (See Column 7 Lines 44-45). Agarwal does not explicitly disclose that the digital audio signal conforms to a Sony-Philips Digital Interface (S/PDIF) standard. Agarwal does disclose that the digital audio output conforms to the Audio Codec '97 standard (See Column 8 Lines 26-50). AC97 discloses support for S/PDIF communications (See Chapter 6).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Agarwal with an S/PDIF digital audio output, resulting in the invention of Claim 11, because S/PDIF is supported by the Audio Codec '97 standard used by Agarwal and because S/PDIF is an established consumer electronics digital audio interface (See Section 6.1 of AC97).

21. Claims 7-10 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal and AC97 as applied to Claims 6 above, and further in view of US Patent Number 6,359,994 to Markow et al. ("Markow").

22. In reference to Claims 7 and 8, Agarwal and AC97 disclose the limitations as applied to Claim 6 above. Agarwal and AC97 do not disclose a second power amplifier coupled to the second output, as in Claim 7, and a subwoofer coupled to the second power amplifier, as in Claim 8. Markow discloses a docking station having a first set of speakers (See Figure 3 Numbers 300 and 302 and Figure 5 Numbers 504 and 505) coupled to a first power amplifier (See Figure 3 Numbers 320 and 322), and a subwoofer (See Figure 1B Number 107, Figure 3 Number 304, and Figure 5 Number 508) coupled to a second power amplifier (See Figure 3 Number 324).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Agarwal and AC97 with the docking station subwoofer of Markow, resulting in the invention of Claims 7 and 8, in order to provide good sound quality with adequate bass in a portable computer without requiring cumbersome external speakers, thus increasing the enjoyment the user can get from the computer (See Column 2 Line 38 – Column 3 Line 4 of Markow).

23. In reference to Claims 9 and 10, Agarwal, AC97, and Markow disclose the limitations as applied to Claim 8 above. Markow further discloses that the docking station has a substantially closed volume having an aperture, as in Claim 9, and that the subwoofer is situated in the aperture to project sound therethrough, as in Claim 10 (See Figure 1B Numbers 100 and 107).

24. In reference to Claims 18 and 19, Agarwal and AC97 disclose the limitations as applied to Claim 17 above. Agarwal and AC97 do not disclose amplifying the analog audio signal by a second audio amplifier thus providing a second amplified analog audio signal, as in Claim 18, and providing the second amplified analog audio signal to a subwoofer loudspeaker, as in Claim 19. Markow discloses a docking station having a first set of speakers (See Figure 3 Numbers 300 and 302 and Figure 5 Numbers 504 and 505) coupled to a first power amplifier (See Figure 3 Numbers 320 and 322), and a subwoofer (See Figure 1B Number 107, Figure 3 Number 304, and Figure 5 Number 508) coupled to a second power amplifier (See Figure 3 Number 324).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Agarwal and AC97 with the docking station subwoofer of Markow, resulting in the invention of Claims 18 and 19, in order to provide good sound quality with adequate bass in a portable computer without requiring cumbersome external speakers, thus increasing the enjoyment the user can get from the computer (See Column 2 Line 38 – Column 3 Line 4 of Markow).

25. In reference to Claims 20, Agarwal, AC97, and Markow disclose the limitations as applied to Claim 19 above. Agarwal further discloses that the docking station exhibits a substantially closed volume (See Figure 1 Number 20). Markow also further discloses that the docking station exhibits a substantially closed volume (See Figure 1B Number 100).

Conclusion

26. The following art made of record and not relied upon is considered pertinent to Applicant's disclosure: ePanorama.net – Audio Documents – SPDIF; US Patent Application Publication Number 2005/0018868 to Chick et al.; US Patent Application Publication Number 2003/0067402 to Subramoniam et al.; US Patent Number 6,990,549 to Main et al.; US Patent Number 6,374,148 to Dharmarajan et al; US Patent Application Publication Number 2006/0212637 to Lo et al.; US Patent Number 6,941,181 to Mathurin; US Patent Number 6,529,787 to Weikel et al.; and US Patent Number 6,301,513 to Divon et al.

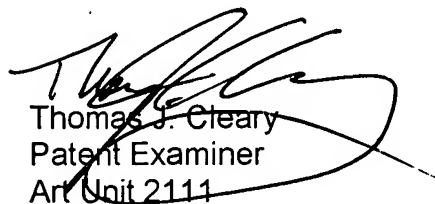
Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Thomas J. Cleary whose telephone number is 571-272-3624. The Examiner can normally be reached on Monday-Thursday (7-3), Alt. Fridays (7-2).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mark Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

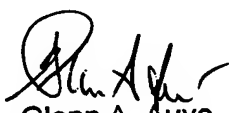
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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